Risk Level Determination Guidance for Contiguous and Non-contiguous Highway Projects

December 2016

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Division of Design
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1120 N Street
Sacramento, California

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LIST OF ACRONYMS

ASTM	American Society for Testing and Materials
BMPs	Best Management Practices
CGP	Construction General Permit
DEA	Division of Environmental Analysis
DSA	Disturbed Soil Area
CWA	Clean Water Act
EPA	Environmental Protection Agency
GIS	Geographic Information System
HOV	High-occupancy vehicle
long/lat	Longitude/Latitude
MS4	Municipal separate storm sewer system
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resources Conservation Service
OSWM	Office of Storm Water Management
PA/ED	Project Approval/Environmental Document
PE	Project Engineer
PID	Project Information Document
PRDs	Permit Registration Documents
RL	Risk Level
RWQCB	Regional Water Quality Control Board
RUSLE	Revised Universal Soil Loss Equation
SMARTS	Stormwater Multi-Application and Reporting System (This system is not available at this time and is referenced in this document to show how it will be used in the future.)
SWDR	Storm Water Data Report

SWRCB	State Water Resources Control Board
TDC	Targeted Design Constituents
TMDLs	Total Maximum Daily Loads
WQPT	Water Quality Planning Tool

1. INTRODUCTION TO PROJECT RISK LEVEL DETERMINATION

1.1. *OVERVIEW*

This document contains guidance on project risk level (RL) determination for contiguous and non-contiguous type highway construction projects. Methods for developing the RL are included as required by the Construction General Permit (State Water Board Order 2009-0009-DWQ). Generally, projects that disturb more than one acre of soil must apply for coverage under the CGP and will require a project RL determination. Projects that disturb between 1 and less than 5 acres of soil may be exempt from the CGP through a Rainfall Erosivity Waiver. Refer to the Project Planning and Design Guide for more information.

This guide is intended to assist the PE in developing a project RL determination for the Stormwater Data Report (SWDR). The project RL determination is a required attachment to the SWDR and should be summarized in Section 3 of the SWDR.

1.2. *SEDIMENT RISK*

The sediment risk is determined by using the Revised Universal Soil Loss Equation (RUSLE) to obtain sheet and rill erosion expressed in tons/acre

- Low Sediment Risk: < 15 tons/acre
- Medium Sediment Risk: >=15 and <75 tons/acre
- High Sediment Risk: >= 75 tons/acre

Inputs to the RUSLE equation are based on the following:

- location of the site
- construction work window
- top soil layer of the site
- "non-vegetated"/bare ground condition of the site (e.g., lengths and slopes), and
- disturbed soil areas only

Sediment yield is based on a variation of the RUSLE equation that only uses R, K, and LS so that the Watershed Erosion Estimate (R x K x LS) is expressed in tons/acre (NOT the tons/acre, year of the RUSLE equation).

The primary factor driving the Watershed Erosion Estimate is the Erosivity Factor, R, representing rainfall energy causing erosion. The Erosivity Factor is prescriptively calculated using the EPA Rainfall Erosivity Factor Calculator for Small Construction Sites. The value of R is proportional to the length of the construction. The easiest way to reduce the site sediment yield is to reduce the construction window.

1.3. *RECEIVING WATER RISK*

Receiving water risk is either high or low. Receiving water risk is based on whether a project drains to a sediment-sensitive waterbody. A sediment-sensitive waterbody is either on the most recent 303d list for waterbodies impaired for sediment; has a USEPA-approved Total Maximum Daily Load implementation plan for sediment; **or** has the beneficial uses of COLD, SPAWN, and MIGRATORY. A project that meets at least one of the three criteria has a high receiving water risk.

A map of California is shown below with High Risk Receiving Waters (dark brown areas) and meet one of the two criteria: impaired by sediment or have cold, spawn, migratory beneficial uses as determined by the appropriate Regional Water Quality Control Board. This is not a determination made by Caltrans. High Risk Receiving Water Bodies are shown in mapping on the State Boards Website and as a layer on the Caltrans Water Quality Planning Tool (http://svctenvims.dot.ca.gov/wqpt/wqpt.aspx).

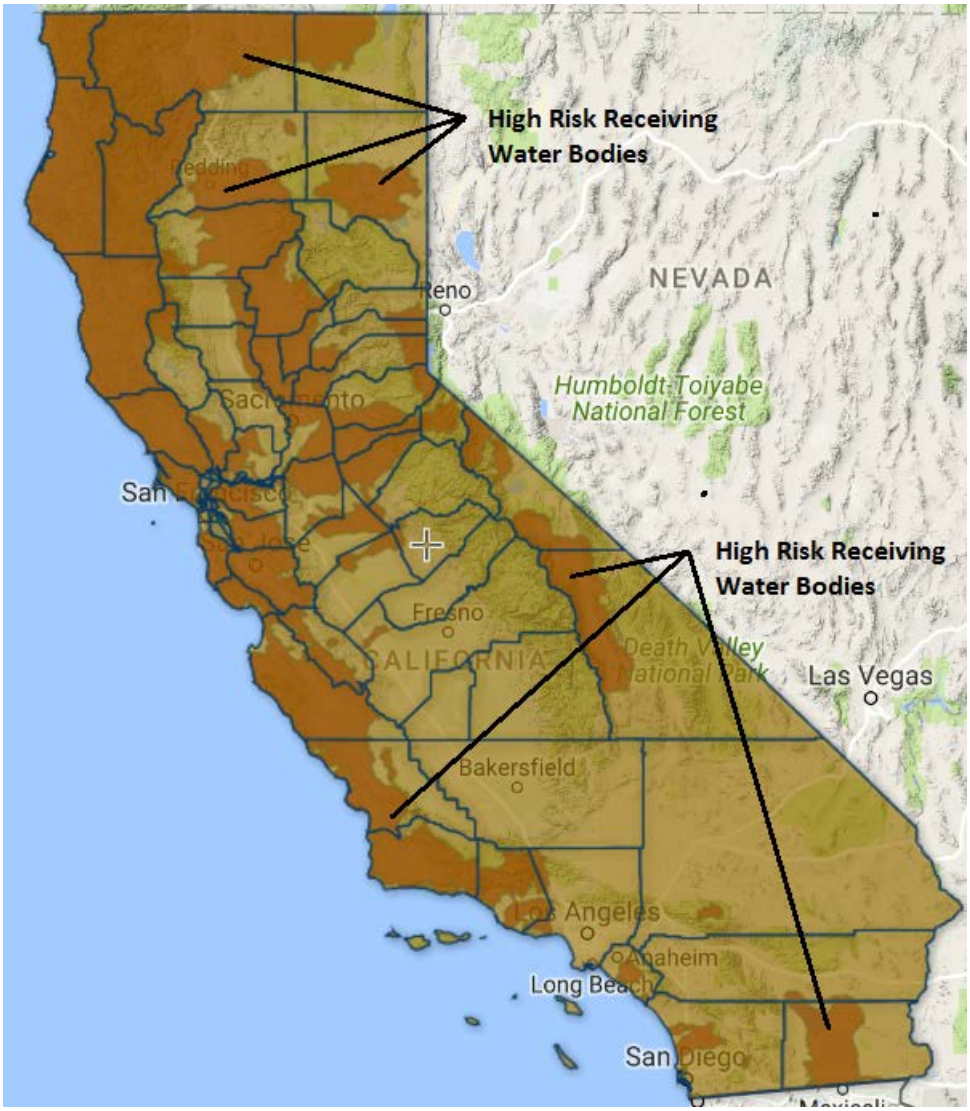


Figure 1-1 California High Risk Receiving Water Bodies Map

1.4. *COMBINED RISK LEVEL DETERMINATION*

The Construction General Permit (CGP) (State Water Board Order 2009-0009-DWQ) went into effect on July 1, 2010. The CGP is a risk-based permit that establishes three levels of environmental risk possible for a construction site.

The Risk Level (RL) is calculated in two parts:

- Sediment Risk (Section 1.2), and
- Receiving Water Risk (Section 1.3).

The CGP Risk Level (RL) determination quantifies sediment and receiving water characteristics and uses these results to determine the project's overall RL as Level 1, 2 or 3.

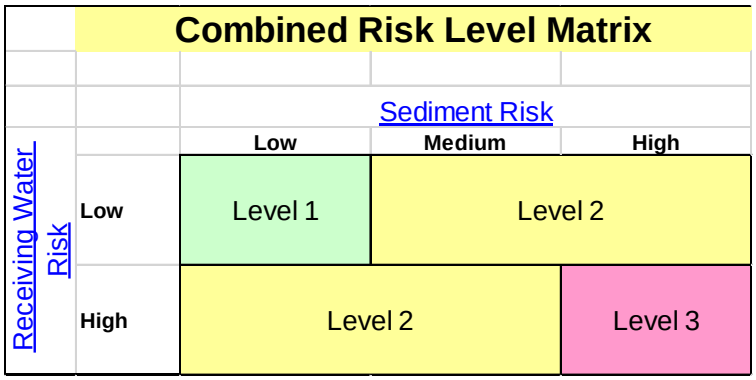


Figure 1-2 Combined Risk Level Matrix

The lowest risk level a project can be that has a High Risk Receiving Water is RL2. Therefore expending a lot of effort to reduce the sediment yield of the project site may not result in a reduced RL. Highly erodible soils, in higher rainfall areas, on steep slopes increase the 'sediment risk'.

In a narrative sense RL1 projects are projects that are not within a High Risk Receiving Water Body. RL2 projects are projects having a Watershed Erosion Estimate of less than 75 tons/ac in a High Risk Receiving Water Body. RL3 projects are those having a Watershed Erosion Estimate of 75 tons/ac or more in a High Risk Receiving Water Body.

Any questions in regards to the Risk Level determination should be directed to the District/Regional Stormwater Coordinators or the Headquarters Office of Storm Water Management – Design.

1.5. *REPORTING REQUIREMENTS AND DOCUMENT PREPARATION DIFFERENCE BETWEEN RISK LEVELS*

The practical differences between Risk Levels are relatively small and involve an escalation of reporting requirements and document preparation. All risk levels require SWPPPs, perimeter, slope stabilization, and tracking control BMPs. RL2 and RL3 require

REAPs, Stormwater Sampling & Analysis, and have escalating levels of action based on reporting.

1.6. *TYPES OF PROJECTS BEING CONSIDERED FOR RISK LEVEL DETERMINATION*

There are two types of highway projects that are considered in this guidance:

- Contiguous Linear Highway Construction Site Projects
- Multiple (non-contiguous) Construction Sites within a Project. This type of project is usually not a Common Plan of Development (refer to PPDG, Appendix G for definition).

For each type of project the State Water Resources Control Board (SWRCB) allows two different methods when using the Risk Determination Excel spreadsheet from Appendix 1 of CGP:

- **GIS Map Method** (EPA Rainfall Erosivity Calculator & GIS map),
- **Individual Method** (EPA Rainfall Erosivity Calculator & Individual Data).

Both of these methods are explained in detail in this guidance.

1.7. *DEFINITIONS THE PE SHOULD UNDERSTAND*

Connecting directly or indirectly to a water body – A direct discharge means a discharge of surface runoff directly to the surface water body without first flowing through a municipal separate storm sewer system (MS4). An indirect discharge means the discharge of surface runoff to the surface water body through an MS4 stormwater conveyance system, unlisted tributary to the surface water, or a stormwater discharge that otherwise reaches the water body.

Tributary Rule - There are some ambiguities regarding connecting waterbody downstream.

1. Question - If there are a couple of creeks in the immediate downstream area of the project site which are not listed as the 303 (d) waterbody but they are connecting to another creek or river more than a mile or two downstream that is impaired for sediment, how is this considered in risk assessment? This can result to classification of the project to risk level 3 and subject the project to more monitoring and reporting requirements. Answer – Consult with District/Design Stormwater Coordinator for logical tributary boundaries in regards to waterbody impairment for sediment.
2. Question - Is there a distance threshold or guideline for consideration of any downstream adjoining waterbody? Answer – No. Consult with District/Design Stormwater Coordinator.

1.8. *PLANNING WATERSHEDS*

As many Caltrans projects are linear in nature, there is a reference in the CGP that needs to be considered. Section VIII Risk Determination of CGP Order states, “For any site that spans two or more planning watersheds, (watersheds that range in size from 3,000 to 10,000 acres as defined by Calwater watershed documents

http://cain.ice.ucdavis.edu/calwater/calwfaq.html) the discharger shall calculate a separate Risk Level for each planning watershed. The discharger shall notify the State Water Board of the site's Risk Level determination(s) and shall include this determination as a part of submitting the PRDs. If a discharger ends up with more than one Risk Level determination, the Regional Water Board may choose to break the project into separate levels of implementation."

This means that when evaluating your Risk Level within a project, you must be cognizant of where your project is in relation to separate planning level watersheds. More information is provided within this guidance.

Not all watersheds have been mapped to the planning watershed level. The watersheds shown on the Water Quality Planning Tool (WQPT) and the District 8 website are the most recent and up to date watershed maps available by the State. These maps are not true hydrologic datasets following ridgelines and are approximate. The PE should document which hydrologic boundaries are being used for the project. Table 1-1 shows the different boundaries (symbol column) available that have been mapped.

Table 1-1 California System (CalWater 2.2)

Symbol	Description	Approx. Acres	# in CalWater 2.2
HR	Hydrologic Region	8,150,000	10
HU	Hydrologic Units	430,000	190
HA	Hydrologic Areas	156,000	522
HSA	Hydrologic Sub-Areas (vary greatly from 50,000 to >450,000)	125,000	655
SPW	Super Planning Watersheds	50,000	1623
PW	Planning Watersheds	3,000-10,000	6271

1.9. *WEBSITE REFERENCES*

A reference section is included with this guidance with internet and intranet websites. These websites can be used to obtain additional information pertaining to this guidance such as the Construction General Permit, Risk Determination Spreadsheets, and Geotechnical Services contacts.

1.10. *GOALS WHEN DETERMINING A PROJECT RISK LEVEL*

- It is desirable to have a single Risk Level (RL) for each project.
- It may be desirable to have the lowest RL possible.
- Planning and scheduling construction during the dry season usually reduces the RL, especially in central and southern California, and may be a cost effective alternative to extensive BMPs and higher monitoring and reporting.

2. PROCEDURES FOR A CONTIGUOUS LINEAR HIGHWAY CONSTRUCTION SITE PROJECT

2.1. *GIS MAP METHOD – EPA RAINFALL EROSIVITY CALCULATOR & GIS MAP*

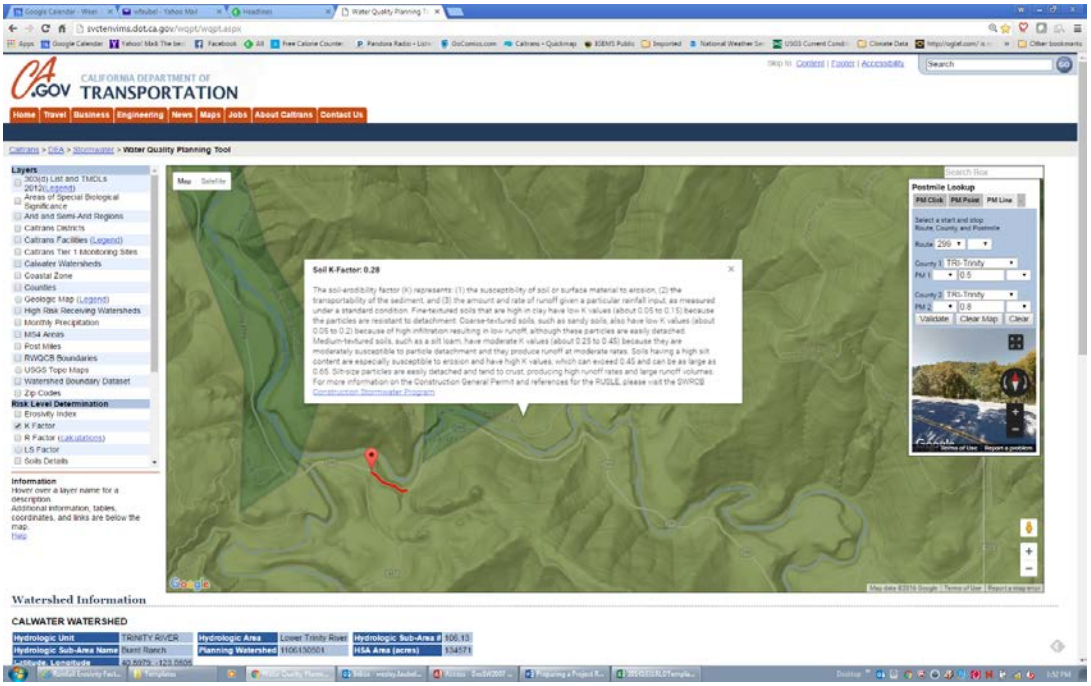
If a quick analysis is desired, the GIS Map Method is sufficient. This method may produce a higher watershed erosion estimate in tons/acre than the Individual Method.

2.1.1. Determine Sediment Risk

1. Download the Risk Determination Excel spreadsheet from Appendix 1 of CGP at the following URL:
   http://www.waterboards.ca.gov/water_issues/programs/stormwater/docs/constpermits/wqo_2009_0009_app_1.xls
   a. Click on the "Start" tab of the Risk Determination Excel spreadsheet (the spreadsheet should default to this tab when the spreadsheet is first opened).
   b. Click on the "1. Sediment Risk" tab and fill in the R, K and LS factors to determine the site sediment risk factor.

2. Use the following URL to get to Caltrans WQPT. Use this tool to determine the project's K and LS values for each planning watershed. Input these values into the Risk Determination Excel Spreadsheet. Copy a screen print of the K and LS Factors and paste into the spreadsheet as back-up documentation.
   http://www.owp.csus.edu/research/stormwater/tools/wqpt.htm

Figure 2-1 K Value Documentation



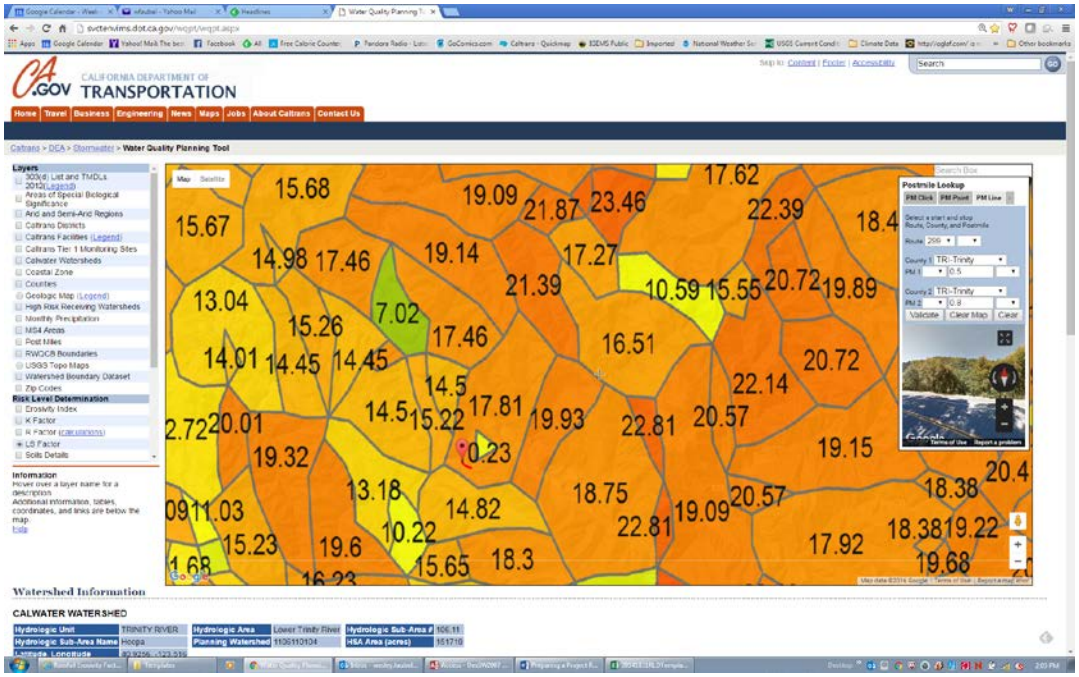


Figure 2-2 LS Value Documentation

3. Determine R Factor by opening the US EPAs Rainfall Erosivity Factor Calculator for Small Construction Sites (https://www.epa.gov/npdes/rainfall-erosivity-factor-calculator-small-construction-sites).

    a. Enter the project Lat/Long in the spaces provided.
    b. Enter the Begin and End construction dates in the spaces provided and in the format required. Note:
        - Begin construction is the first day of anticipated soil disturbing activities. End construction is the last day of anticipated soil disturbing activities. For multi-season projects this period will span more than one year.
        - RLDs attached to a PID or PAED SWDR typically use the Approve Contract and CCA milestones.

        - RLDs attached to a PS&E SWDR use the actual projected construction dates. Coordinate dates with Construction.

    Go back to the Risk Determination Excel spreadsheet (“1. Sediment Risk” tab) and insert “R Factor Value”. A planning watershed erosion estimate is calculated and Site Sediment Risk Factor obtained. See bottom right hand corner of spreadsheet for results. Document each planning watershed Sediment Risk Factor.

Copy a screen print of the EPA calculator and paste into the spreadsheet as back-up documentation.

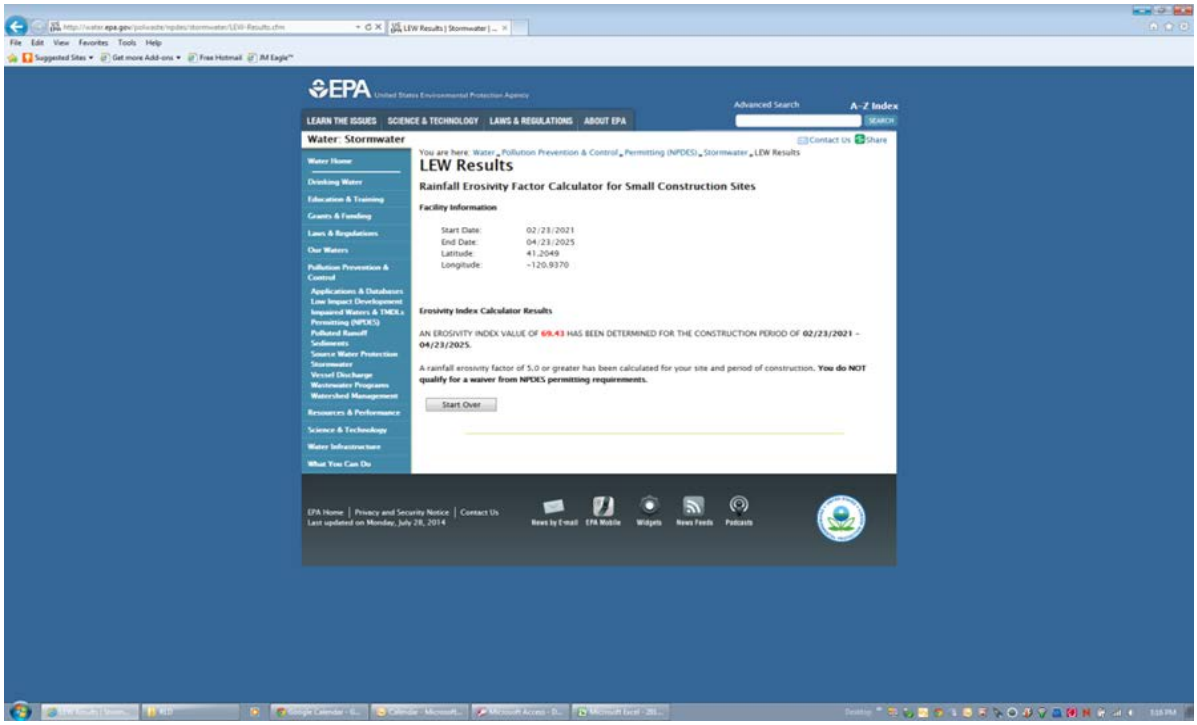


Figure 2-3 R Value Documentation

The project may be eligible for an Erosivity Waiver from the requirements of the CGP if the R factor is less than 5.0 and the DSA is greater than 1.0 but less than 5 acres. Consult the Design Stormwater Coordinator or Construction Stormwater Coordinator to determine final eligibility.

2.1.2. Determine Receiving Water Risk

1. Click on "2. Receiving Water Risk" tab of Risk Determination Excel Spreadsheet. Use the following URL to get to Caltrans WQPT (Chrome or Firefox works the best). http://www.owp.csus.edu/research/stormwater/tools/wqpt.htm. Select **High Risk Receiving Watersheds** in the Layers section of the WQPT. If your project is within a Red area it is within a High Risk Receiving Watershed. The map is prescriptive.

   If you believe your project receiving waters should not be High Risk due to the Beneficial Uses or impairments then consult with the District/Regional NPDES Coordinator. Exceptions MUST be in writing from the Regional Water Quality Control Board.

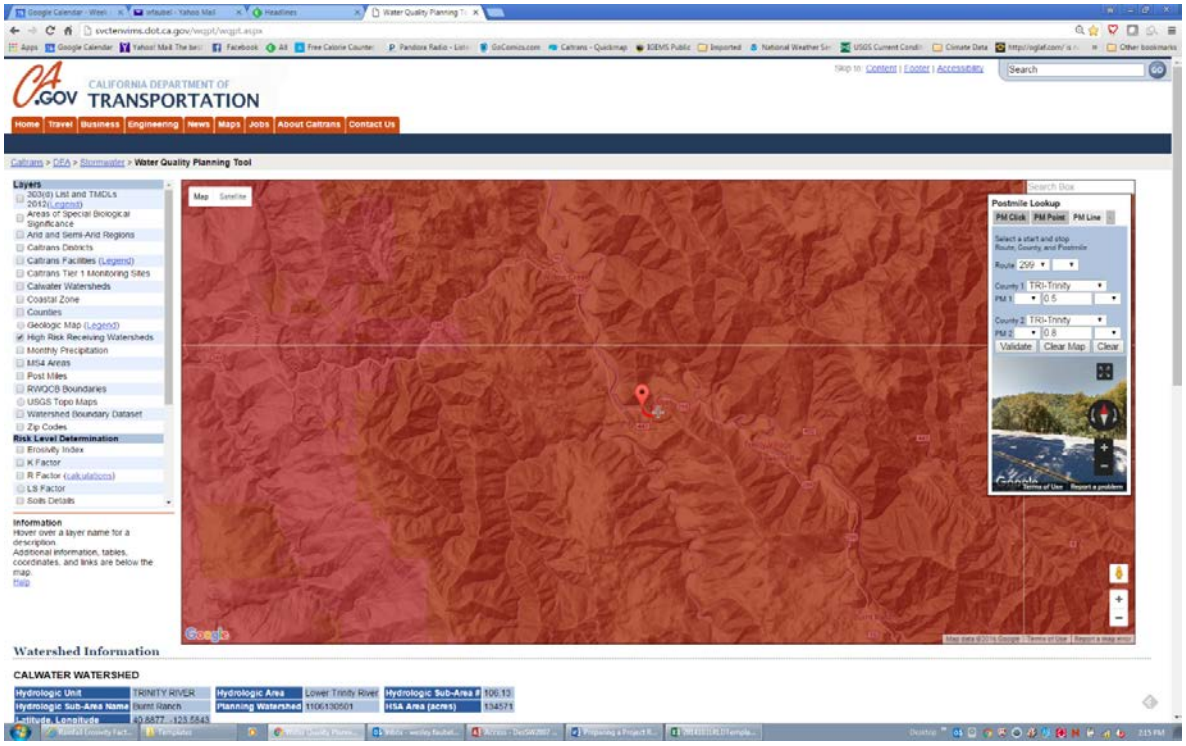


Figure 2-4 High Risk Receiving Watershed Documentation

a. Enter **Yes** if your project is within a High Risk Receiving Watershed (red area of map) or **No** (not in red area of map) in the appropriate cell of the Receiving Water Risk Factor Worksheet.
b. Copy a screen print of the High Risk Receiving Watershed and paste into the spreadsheet as back-up documentation.

The Project Risk Level will generate automatically based on the information entered.

2.1.3. Combined Risk

Click on "3 Combined" tab of Risk Determination Excel Spreadsheet to see project combined RL for each planning watershed. Document each planning watershed Combined RL.

2.1.4. Can the Planning Watershed Combined Risk Level be Reduced?

Yes, there may be an opportunity to reduce the overall Combined Risk Level. Consider revaluating sediment risk by using the Individual Method in Section 2.2. This may reduce the sediment risk factor and possibly reduce the Combined Risk Level of the project.

2.2. *INDIVIDUAL METHOD - EPA RAINFALL EROSIVITY CALCULATOR & INDIVIDUAL DATA*

This method may be used during the design phase of a project when cross section information is available and may ultimately reduce the watershed erosion estimate in tons/acre.

2.2.1. Determine Sediment Risk

1. Recalculate the sediment risk by using more refined K and LS values.

2. Recalculate the R value using the same method used in the previous method (GIS Map Method) for each planning watershed with any updated information available.

3. Use the same Risk Determination Excel spreadsheet as used in the GIS Method: http://www.waterboards.ca.gov/water_issues/programs/stormwater/docs/constpermits/wqo_2009_0009_app_1.xls
    c. Click on the "Start" tab of the Risk Determination Excel spreadsheet (the spreadsheet should default to this tab when the spreadsheet is first opened).
    d. Click on the "1. Sediment Risk" tab and fill in the new R factor.
4. Go to NRCS website for on-line soil surveys (determination of 'K" value). Use the following URL: http://websoilsurvey.nrcs.usda.gov/app/HomePage.htm.
    a. Click on the WSS green button.
    b. Use the Quick Navigation tool to locate site.
        i. Example – Double click on the Longitude and Latitude box and input values.
        ii. Zoom in and out until project limits are visible on map.
        iii. Click on the AOI by polygon button above the map and draw around the site limits. It may take several tries until desired results are obtainable. (It may be difficult to use this website if the new alignment deviates from the existing highway. If this is the case it may be desirable to download soil mapping and place as a background level in Microstation.)
        iv. Click on Soil Data Explorer tab
        v. and then soil properties and qualities tab.
        vi. Click on Soil Erosion Factors.
        vii. Click on K Factor, Rock Free.
        viii. Click on View Rating tab to see results.
        ix. Determine a weighted average based on area for site K Factor.
        x. Document each planning watershed K Factor.

5. Go back to "1. Sediment Risk tab on Risk Determination spreadsheet and input K Factor Value for each planning watershed. If difficulty in determining K Factor,

consult Geotechnical Services at the following URL:
http://www.dot.ca.gov/hq/esc/geotech/

6. For a consistent statewide method, determine LS Factor Value as follows:
   a. Use the best available data for the phase of project being considered. Typically, use USGS Quad Maps (use only when surveyed data is not available), contour mapping generated from surveyed data, or cross sections developed from surveyed data.
   b. Designate cross sections uniformly spaced along the alignment. It is recommended to use cross sections spaced approximately every 1,000 feet (a minimum of two to three for a very small project, which can be defined as a quarter mile or less in length). For most projects it is recommended to use five or more cross sections along the construction alignment for each RL determination. The PE must review the locations of each cross section to insure reasonableness. For instance, if one of the locations falls at a bridge location within a creek crossing, the PE should take another representative cross section either side of the bridge location away from the non-standard cross section. Since the cross sections are uniformly spaced, a simple average will provide a weighted average. For statistical reliability, determine a minimum number of cross sections; especially if the topography is variable.

   c. For each cross section, obtain the **existing** hillside slope length (ft) and slope (%) **within the disturbed soil area limits** that are within Caltrans right of way and easements. Typically, one to six hillside slopes should be used to determine an overall length of disturbed area and weighted average slope based on length.

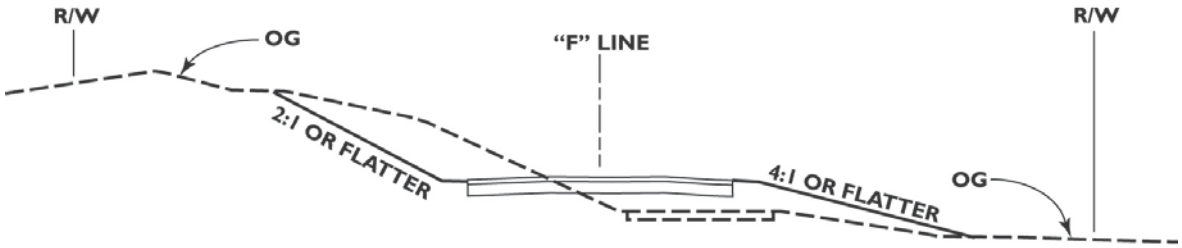


Figure 2-5 Cross Section Sta "F" 171+200

Figure 2-1 Cross Section Sta "F" 171 + 200. Above is a cross section showing the original grade, proposed work, and right of way limits. Anticipated DSA includes cut and fill slopes.

   d. Refer to Figure 2-1 for an example of a typical cross section. This cross section at station F 171+200 shows existing ground, proposed shoulders, side slopes, and proposed pavement.

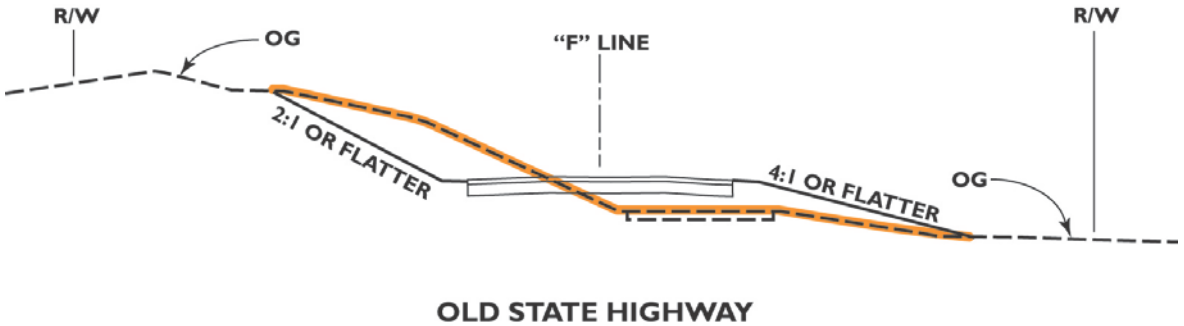


Figure 2-6 Cross Section Showing Existing Slope

Figure 2-2 Cross section showing existing slope. The orange line indicates the existing slopes affected by the proposed work.

e. Figure 2-2 shows the original ground surface associated with the proposed work in orange. Next, divide the existing slope into segments based upon uniform slope steepness as shown in Figure 2-3.

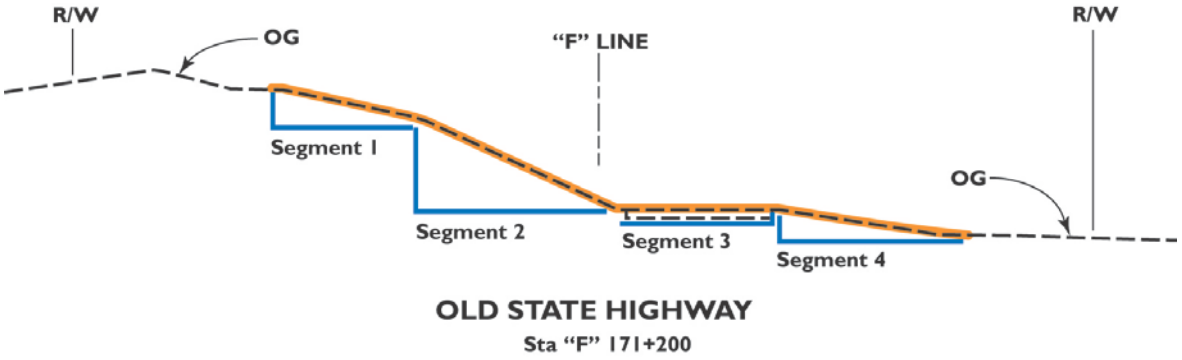
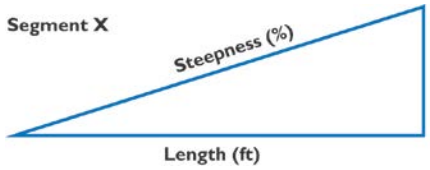


Figure 2-7 Cross Section Showing Four Slope Segments

Figure 2-3 Cross section showing Four Slope Segments. For this cross section, the existing slope can be characterized by four segments. The number of segments will vary per cross section.

Table 2-1 Cross Sectional Slope Characterization



Segment	Length(ft)	Rise(ft)	Steepness(%)	LS
1	16.40	4.26	25.97	1.15
2	22.96	10.49	45.68	2.51
3	18.04	1.31	7.26	0.33
4	22.96	3.61	15.72	0.90

Table 2-1. For each segment, provide the length and rise in feet. If you use the Topography Tool, it will calculate the steepness and LS value.

f. For each cross section, determine an LS factor from the LS Table in the Risk Determination spreadsheet. Click on the "LS" tab to see the table.
g. Average all cross section LS factor values to obtain a planning watershed average LS factor.

Table 2-2 LS Table Values

Site Specific Analysis of LS Factor
Project XX-XXXXXX

Planning Level Watershed:

Number of X-Sections = 6

Alignment		Number of	Slope Segment 1				Slope Segment 2				Weighted Average for All segments	
Station	Line	Segments	Length (ft)	Rise (ft)	Steepness (%)	LS	Length (ft)	Rise (ft)	Steepness (%)	LS	Total Slope Length (ft)	Weighted LS
171+ 00	F	1	12.600	3.600	28.57	1.07	0.000	0.000	N/A	0.00	12.600	1.07
171+100	F	2	15.300	4.100	26.80	1.13	16.700	3.500	20.96	0.95	32.000	1.04
171+200	F	4	16.400	4.260	25.98	1.15	22.960	10.490	45.69	2.51	80.720	1.28
171+300	F	4	16.100	3.800	23.60	1.04	20.600	9.200	44.66	2.25	73.900	1.16
171+400	F	3	15.300	4.100	26.80	1.13	16.700	3.500	20.96	0.95	50.400	0.77
171+500	F	1	12.200	3.800	31.15	1.12	0.000	0.000	N/A	0.00	12.200	1.12

Area Weighted LS = 1.07
(Composite Weigthed LS / Number of X-Sections)

Table 2-2. The slope length, rise, steepness, and LS value are tabulated by cross section. This table was produced using the Topography Tool. Slope Segments 3-6 were omitted for readability.

Note: Several references have been made to the Topography Tool. Briefly:
Purpose: *This tool will assist Caltrans staff in developing a weighted average, by area, for slopes as required for the Construction General Permit's Risk Level Determination, Individual Method.*

Synopsis: *For any given cross section, there will be one or more existing hillside slopes within the disturbed soil area limits of the planned work. For each of these existing slopes, the designer will provide the horizontal slope length (feet) and vertical rise (feet). For each slope, called segments, this Excel Worksheet will use these inputs to calculate slope steepness in percent and return a RUSLE 'LS Value' using the "LS values for Construction Slopes" table from page 7 of Appendix 1 of the Construction General Permit. For each cross section, a weighted average for LS is returned based upon slope length dominance (e.g., the longer slopes will dominate the average). Finally, a composite LS for the entire alignment is returned as a simple average of all cross sections.*

7. Go back to "1. Sediment Risk" tab on the Risk Determination spreadsheet and input the LS Factor. A planning watershed erosion estimate is calculated and Site Sediment Risk Factor obtained. See bottom right hand corner of spreadsheet for results.
   a. Document each planning watershed Sediment Risk Factor. Compare this Sediment Risk Factor to the GIS Map Method.

8. If the risk has not been reduced, document and go back to "K" tab on the Risk Determination spreadsheet.
    a. The PE must use engineering judgment to decide if obtaining soil samples using this method might reduce the RL.
    b. The PE should document the decision process if not using this method.
    c. OSWM and Geotechnical Services has discussed obtaining site soil samples and agree that few projects should be using this method because the NRCS soil maps in most instances will be reliable.
    d. There may be times where a high K value soil type might be within a significant portion of the project and site soil testing necessary.
    e. Another reason for testing would be if top layers of hillside soils on the project site have been disturbed and NRCS soils may not be the type of soils mapped.
    f. There may be instances where NRCS soil maps are not available. If this is the case, see if soil information has already been collected.
    g. Make sure to only use top soil because this is the soil of concern.
    h. Consult with Geotechnical Services if in doubt when to grab field samples or no previous soil samples available.
    i. Request Caltrans Geotechnical Services to perform a particle size analysis (ASTM D-442) for a representative number of cross section locations within the planning watershed to determine a Soil Erodibility Factor (K) using the nomograph in the Risk Determination spreadsheet. It is recommended to download "K" Value mapping and use as a background drawing to project Layout Sheets in order to determine representative soil sample locations.
    j. Coordinate with Geotechnical Services for soil sample locations, number of samples to be taken, and if areas defined on NRCS maps for each soil type can be used in weighted average area calculation.
    k. An average "K" Value can be calculated using a weighted average based on area.
    l. It should be noted that the **soil-erodibility factor K represents: (1) susceptibility of <u>existing surface material</u> to erosion**, (2) transportability of the sediment, and (3) the amount and rate of runoff given a particular rainfall input, as measured under a standard condition.
    m. Once the information is determined go back to "1. Sediment Risk" tab on the Risk Determination spreadsheet.
    n. input the K Factor for the planning watershed. An erosion estimate is recalculated and Site Sediment Risk Factor obtained. See bottom right hand corner of spreadsheet for results.
    o. Document the planning watershed Sediment Risk Factor. Compare this Sediment Risk Factor to previous calculations. If the risk has been reduced, go to step 9.
    p. If the risk has not been reduced, the PE should review the K values of the soil samples versus the NRCS K values at the representative locations.
    q. If the values are reasonable, stop and document.

r. If not, discuss with Geotechnical Services and document decisions if a Combined RL can be determined with the K values obtained.

9. Click on "3 Combined" tab in the Risk Determination spreadsheet to see project combined RL for the planning watershed. Document the planning watershed Combined RL.

If there is more than one RL determination for multiple planning watersheds, the PE shall notify the District/Regional Storm Water Coordinator. The Regional Water Board may choose to break the project into separate levels of implementation. Early coordination is recommended during the initial planning stages (PID and/or PA/ED) of a project. The Coordinator will decide if coordination with the Regional Water Board is required to determine if the project should be broken into more than one RL.

3. PROCEDURES FOR MULTIPLE CONSTRUCTION SITES (NON-CONTIGUOUS) WITHIN A PROJECT

Caltrans projects vary in type. An example of a non-contiguous project would be an HOV ramp widening project where several ramps are being widened and the construction area of each of the ramps are separated by ¼ mile where no construction occurs. The proposed work would consist of widening the existing ramps, installing meters, and modifying the existing drainage systems at several locations. If no construction occurs for ¼ mile between construction sites, the project would be considered non-contiguous. Multiple construction sites within the project exist. This section focuses on these types of projects where construction areas are not contiguous and usually not defined as a Common Plan of Development (refer to PPDG, Appendix G for definition).

EPAs Fact Sheet (https://www3.epa.gov/npdes/pubs/cgp2008_finalfactsheet.pdf) has more information on non-contiguous projects and how to apply to Caltrans projects.

EPAs Fact Sheet (page 7 of 52, 2nd paragraph):
To help clarify what projects must be addressed as part of a "common plan of development or sale" and what projects can be considered on their own merit, EPA is addressing the issue of non-contiguous construction activities. Where discrete construction projects within a larger common plan of development or sale are located at least 1/4 mile apart and the area between the projects is not being disturbed, each individual project can be treated as a separate plan of development or sale provided any interconnecting road, pipeline or utility project that is part of the same "common plan" is not concurrently being disturbed. For example, oil and gas well pads separated by 1/4 mile could be treated as separate "common plans." However, if the same two well pads and an interconnecting access road were all under construction at the same time, they would generally be considered as part of a single "common plan" for permitting purposes. If a utility company was constructing new trunk lines off an existing transmission line to serve separate residential subdivisions located more than 1/4 mile apart, the two trunk line projects could be considered to be separate projects.

3.1. *DISTURBED SOIL AREA*

The Disturbed Soil Area (DSA) for multiple location sites within a project will be calculated based on each site. Sites must be separated by at least ¼ mile where there is no construction for the entire contract. DSA is not calculated based on adding all the sites together. For each site determined to be one acre or more, a separate RL determination will need to be performed for those locations. The sites that are less than one acre will not require a RL determination.

Use Section 2 "Procedures for a Contiguous Linear Highway Construction Site Project" to determine the RL for each site when DSA is one acre or more.

4. REFERENCES

Internet Websites:

- Use the State Water Resources Control Board website to download Construction General Permit.
  http://www.waterboards.ca.gov/water_issues/programs/stormwater/constpermits.shtml
- Review Risk Determination section in CGP Order on pages 34 and 35.
  http://www.waterboards.ca.gov/water_issues/programs/stormwater/docs/constpermits/wqo2009_0009_dwq.pdf
- Review Risk Determination section in CGP Fact Sheet on pages 28 through 30.
  http://www.waterboards.ca.gov/water_issues/programs/stormwater/docs/constpermits/wqo_2009_0009_factsheet.pdf
- Download the Risk Determination Excel spreadsheet from Appendix 1 of CGP.
  http://www.waterboards.ca.gov/water_issues/programs/stormwater/docs/constpermits/wqo_2009_0009_app_1.xls
- Use the following URL to get to Caltrans Water Quality Planning Tool (Chrome or Firefox works the best).
  http://svctenvims.dot.ca.gov/wqpt/wqpt.aspx
- US EPA Rainfall Erosivity Factor Calculator for Small Construction Sites (determination of "R" value)
  https://www.epa.gov/npdes/rainfall-erosivity-factor-calculator-small-construction-sites
- NRCS website for on-line soil surveys (determination of 'K" value)
  http://websoilsurvey.nrcs.usda.gov/app/HomePage.htm
- Use EPAs Fact Sheet for Common Plan of Development definition of non-contiguous projects. See 2nd paragraph of page 7 of 52)
  https://www3.epa.gov/npdes/pubs/cgp2008_finalfactsheet.pdf
- Obtain the most recent version of "Project Risk Level Determination Guidance" and the latest Topography Tool spreadsheet at:
  http://www.dot.ca.gov/hq/oppd/stormwtr/risk-guidance.htm
- Caltrans Geotechnical Services Contacts
  http://www.dot.ca.gov/hq/esc/geotech/